

REMARKS

Reconsideration of the application is respectfully requested.

I. Status of the Claims

Claims 1 and 2 have been amended, no new matter is added.

Claims 3-24 have been cancelled without prejudice or disclaimer of the subject matter therein.

Claims 25 and 26 have been added, no new matter is added.

Claims 1, 2, 25, and 26 are pending.

Claims 1 and 2 are amended to remove the “means plus function” language under 35 U.S.C. § 112, sixth paragraph. Thus, the pending claims should now be interpreted under the “broadest reasonable interpretation” standard and not limited to the constraints of § 112, 6th.

Claim 19 is objected to as to its “ordering.” This objection is now rendered moot with the cancellation of the claim 19.

II. Status of the Drawings

The Drawings have been objected to as using multiple reference characters to identify the same elements. Applicants have not amended the Drawings. Although similar, vehicle speed sensor 11 differs from vehicle speed sensor 16; accelerator angle sensor 13 differs from accelerator angle sensor 18; fuel flow sensor 14 differs from fuel flow sensor 19; and auxiliary brake actuator 15 differs from auxiliary brake actuator 20. The Specification, on page 35, lines 8-21 notes that sensors 11-14 and actuator 15 are electrically connected to an ECU 10, as illustrated in Figure 1, and sensors 16-19 and actuator 20 are electrically connected to each other due to the lack of ECU 10. Thus, the sensors and actuator can have different configurations and can be identified by separate references. Further, the Specification has been amended to remove the description of the reference numerals identifying the separate sensors and actuator as the same.

Applicants respectfully submit that the Drawings are correct as they stand and request the objection be withdrawn.

III. Status of the Abstract

The Abstract has been objected to as exceeding the prescribed length and in language. The Abstract is replaced herein and now conforms to U.S. practice. Applicants respectfully request the objection be withdrawn.

IV. Status of the Specification

The Specification has been objected to as incomplete since it was not filed on 8 ½ by 11 inch paper. Applicants respectfully traverse. 37 CFR § 1.52(a)(1)(ii) specifically states that all papers can be:

Either 21.0 cm by 29.7 cm (DIN size A4) **or** 21.6 cm by 27.9 cm (**8 1/2 by 11 inches**), with each sheet including a top margin of at least 2.0 cm (3/4 inch), a left side margin of at least 2.5 cm (1 inch), a right side margin of at least 2.0 cm (3/4 inch), and a bottom margin of at least 2.0 cm (3/4 inch). (emphasis added).

Applicants filed the present application on A4 paper formatted with the above required margins. Applicants submit that the filing was proper under 37 CFR § 1.52(a)(1)(ii) and thus also proper under MPEP § 608.01, since the MPEP mirrors the same language as the Rule. Applicants respectfully request that the objection be withdrawn.

Further, the Specification has been amended to correct a typographical error and to remove the description of the reference numerals and symbols. No new matter has been added.

V. Rejections under 35 U.S.C. § 112

Claim 21 is rejected under 35 U.S.C. § 112, first paragraph as being non-enabled. Claim 21 has been cancelled, rendering the rejection moot.

Claims 1, 3, 5, 9-12, 14, 19-21, and 23 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Applicants respectfully traverse. Claims 3, 5, 9-12, 14, 19-21, and 23 have been cancelled, rendering the rejection moot.

Regarding claim 1, as noted above, the claims have been amended to remove any “means plus function” language and no longer invoke the constraints of § 112, 6th. Applicants further note that it is axiomatic that Applicants can be their own lexicographer. The term “an information detection device” can now be interpreted as including, if necessary, multiple structures as disclosed in the specification and recited as structure in the claim. Thus, claim 1 is definite.

Regarding claims 9 and 11, while cancelled, their elements have been incorporated into claims 1 and 2 respectively. As noted with claim 1 above, the claims have been amended to remove any “means plus function” language and no longer invoke the constraints of § 112, 6th. Thus, the “information processing device” can now be interpreted as containing any necessary combination of elements supported by the specification. Thus, amended claims 1 and 2 are definite.

Applicants have addressed all of the rejections noted under § 112 and respectfully request that the rejections be withdrawn.

VI. Rejections under 35 U.S.C. §§ 102 and 103

Claims 1-5, 7-17, 19-20, and 23-24 are rejected under 35 U.S.C. § 102(b) as anticipated by United States Patent Number 5,754,965 to Hagenbuch.

Claims 18 and 21 are rejected under 35 U.S.C. § 103(a) as unpatentable over Hagenbuch in view of the Examiner’s statement of ordinary skill in the art.

Claim 6 is rejected under 35 U.S.C. § 103(a) as unpatentable over Hagenbuch in view of United States Patent Number 3,889,647 to Rachel.

Claim 22 is rejected under 35 U.S.C. § 103(a) as unpatentable over Hagenbuch in view of United States Patent Number 4,506,752 to Hara et al. (“Hara”).

Applicants respectfully traverse. Claims 3-24 have has been cancelled, rendering the rejection moot.

Turning to claims 1 and 2, both have been amended to include features from claims 9 and 11. The Examiner contends that Hagenbuch describes that the fuel-saving management system

generates the warning on the engine speed (claim 1) or vehicle speed (claim 2) when the fuel flow rate (claim 1) or accelerator angle (claim 2) exceeds a previously set value.

However, in the corresponding portion of the specification of Hagenbuch, (*see, at least* column 12, lines 4-25) it is described that Engine RPM/engine speed, engine throttle position and engine fuel consumption are stored in a memory with vital sign data when a failure mode is detected. The object of Hagenbuch is not to provide fuel-efficiency, but the invention is related to an apparatus to monitor anomalies. The invention of Hagenbuch is an apparatus to store memory of Engine RPM/engine speed, engine throttle position and engine fuel consumption with vital sign data when a failure occurs. *See, at least*, Hagenbush, Abstract, column 3, lines 3-25.

In contrast, the object of the present invention is to provide a type of fuel-efficiency monitors, especially, for warning a driver only as needed without making the driver uncomfortable. Amended claim 1 recites a system that warns a driver on the engine speed when the fuel flow rate exceeds a previously set value in order to improve fuel efficiency. As described in the Specification, the effects of the operation is that during engine breaking, even if the engine speed increases and satisfies the required warning conditions, since the engine itself is in a minimum fuel injection state, fuel efficiency does not deteriorate. Therefore, there is no need to give a warning or the like to the driver in such a case, and the sense of discomfort that may be given to the driver can be excluded by avoiding unnecessary warning.

Further, amended claim 2 recites a system for achieving fuel efficiency which warns to the driver on the vehicle speed when the accelerator angle exceeds a previously set value. As described in the specification, the effects of the operation is that, for example, during down slope driving on highways/expressways, even if the vehicle speed increases according to a particular gradient of the down slope and satisfies the required warning conditions, when the accelerator angle is too small, fuel efficiency does not deteriorate since an actual fuel injection rate is sufficiently low. Therefore, in that condition there is no need to warn the driver. This reduces the sense of discomfort that may be given to the driver by not excluding unnecessary warnings.

Thus, Hagenbuch does not teach or suggest that “the information-processing device detects a fuel flow rate as information on the running state of the vehicle, and generates the warning on the

engine speed when the fuel flow rate exceeds a previously set value” or that “the information-processing device detects an accelerator angle as information on the running state of the vehicle, and generates the warning on the vehicle speed when the accelerator angle exceeds a previously set value.” None of the Examiner’s Statement, Rachel or Hara teach or suggest the deficiencies in Hagenbuch, and Applicants respectfully submit that claims 1 and 2 are patentable over the prior art and respectfully request that the rejections be withdrawn.

VII. New Claims

New claims 25 and 26 recite elements similar to amended claims 1 and 2 and are allowable over the art of record based at least on the above arguments.

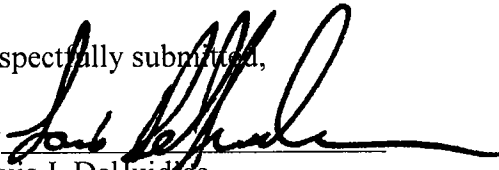
CONCLUSION

In view of the foregoing amendments and remarks, Applicants believe the pending application is in condition for allowance.

If the Examiner believes that any remaining issues can be resolved either by a Supplemental Amendment or by an Examiner's Amendment, the Examiner is invited to contact the undersigned at the number indicated below.

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Respectfully submitted,

By 
Louis J. DelJuice

Registration No.: 47,522
DARBY & DARBY P.C.
P.O. Box 770
Church Street Station
New York, New York 10008-0770
(212) 527-7700
(212) 527-7701 (Fax)
Attorneys/Agents For Applicant